

WHAT IS CLAIMED IS:

1. An antenna apparatus for a mobile communication terminal, comprising:

a main body serving as a housing for the mobile communication terminal, said
5 main body having therein a main board;

a keypad assembly provided with a plurality of key tops formed on a front surface
of the main body; and

an antenna section disposed between the main board and the keypad assembly, in
a lower end of the main body.

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2. The antenna apparatus according to claim 1, wherein said antenna section is
comprised of an antenna sheet disposed underneath the keypad assembly.

3. The antenna apparatus according to claim 1, wherein said antenna section is
15 comprised of an antenna sheet on which a predetermined antenna pattern is formed.

4. The antenna apparatus according to claim 1, wherein the keypad assembly
further comprises:

a flexible printed circuit board provided with a plurality of contacts for generating
20 an electrical signal for inputting to the main board according to each operation of a plurality
of key buttons; and

at least one antenna sheet positioned between the flexible printed circuit board and
the main board.

5. The antenna apparatus according to claim 4, wherein the at least one antenna sheet is provided with a predetermined antenna pattern thereon.

6. The antenna apparatus according to claim 1, wherein the keypad assembly
5 further comprises:

a flexible printed circuit board provided with a plurality of contacts for generating an electrical signal for inputting to the main board according to each operation of a plurality of key buttons; and

at least one antenna sheet positioned between the flexible printed circuit board and
10 the keypad assembly.

7. The antenna apparatus according to claim 6, wherein the at least one antenna sheet is provided with a predetermined antenna pattern thereon.

8. The antenna apparatus according to claim 1, further comprising:
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an external antenna having an antenna housing provided with a helical antenna therein and arranged in an upper end of the mobile communication terminal and a rod antenna retractable into and extendable from the mobile communication terminal through the antenna housing;

wherein said antenna section is disposed between the main board and the keypad assembly and is configured to provide a diversity receiving function in association with said external antenna.
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9. The antenna apparatus according to claim 1, wherein said antenna section is selected from a group comprised of a planar inverted F-type antenna, a meander antenna with plural curvatures, a loop antenna, and a wire antenna.

5 10. An antenna apparatus for a mobile communication terminal, comprising:

 a main body serving as a housing for the mobile communication terminal, said main body having therein a main board;

 a keypad assembly provided with a plurality of key tops exposed on a front surface of the main body;

10 a first antenna disposed in an upper end of the mobile communication terminal, for use in a signal receiving/transmitting function of a radio frequency signal through the mobile communication terminal; and

 a second antenna disposed between the main board and the keypad assembly, disposed in a lower end of the main body.

15 11. The antenna apparatus according to claim 10, wherein said second antenna is comprised of an antenna sheet underlying the keypad assembly, positioned between the main board and the keypad assembly, with a predetermined antenna pattern of a conductive material formed thereon.

20 12. The antenna apparatus according to claim 10, further comprising:

 a flexible printed circuit board for the keypad assembly, arranged between the main board and the keypad assembly, including a plurality of contacts for generating an

electrical signal for inputting to the main board according to each operation of a plurality of key buttons arranged in the keypad assembly; and

at least one antenna sheet positioned between the flexible printed circuit board and the main board.

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13. The antenna apparatus according to claim 10, further comprising:

a flexible printed circuit board for the keypad assembly, arranged between the main board and the keypad assembly, including a plurality of contacts for generating an electrical signal for inputting to the main board according to each operation of a plurality of key buttons arranged in the keypad assembly; and

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at least one antenna sheet positioned between the flexible printed circuit board and the keypad assembly.

14. The antenna apparatus according to claim 10, wherein said second antenna is

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one selected from a group comprised of a planar inverted F-type antenna, a meander antenna with plural curvatures, a loop antenna, and a wire antenna.

15. The antenna apparatus according to claim 10, wherein said first antenna is an

external type of antenna comprising an antenna housing arranged on an upper end of the mobile communication terminal, said antenna housing installed with a helical antenna therein, and a rod antenna retractable into and extendable from the mobile communication terminal.

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16. The antenna apparatus according to claim 10, wherein said first antenna is installed in an upper end of the mobile communication terminal and is selected from a group comprised of a planar inverted F-type antenna, a meander antenna with plural curvatures, a loop antenna, or a wire antenna.

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17. The antenna apparatus according to claim 10, wherein the first antenna is configured to serve a diversity receiving function in association with the second antenna, whereas the second antenna is configured to serve the transmitting/receiving function.

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18. The antenna apparatus according to claim 10, wherein the second antenna is configured to serve a diversity receiving function in association with the first antenna, whereas the first antenna is configured to serve the transmitting/receiving function.

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19. An antenna apparatus for a mobile communication terminal, comprising:

a main body having therein a main board;

a keypad assembly provided with a plurality of key tops formed on a front surface of the main body;

a flexible printed circuit board , arranged between the main board and the keypad assembly, for generating an electrical signal for inputting to the main board according to each operation of a plurality of key buttons arranged in the keypad assembly;

at least one antenna means positioned either between the flexible printed circuit board and the main board, or between the flexible printed circuit board and the keypad assembly.

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20. The antenna apparatus according to claim 19, wherein said antenna means comprises at least one antenna sheet having a predetermined antenna pattern consisting of a conductive material coated thereon.

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21. The antenna apparatus according to claim 19, wherein said antenna means is selected from a group comprised of a planar inverted F-type antenna, a meander antenna with plural curvatures, a loop antenna, and a wired antenna.

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